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09/996,603	11/30/2001	John M. Belcea	MESH029	4108

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MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
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EXAMINER

NGO, NGUYEN HOANG

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/996,603

Applicant(s)

BELCEA, JOHN M.

Examiner

Nguyen Ngo

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 9 and 18 is/are allowed.
6) ☒ Claim(s) 1-8 and 10-17 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This communication is in response to the amendment of 11/09/06. All changes made to the Claims and Specification has been entered. Accordingly, Claims 1-18 are currently pending in the application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 1-8 and 10-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant amends claims 1 and 10 to incorporate the limitation of recording at said node a request transmission time at which a clock information request message is to be transmitted, wherein the request transmission time is a future clock value and further states adequate support is to be found in paragraph [0023] and [0025] of the original specification. However there is no such support and Examiner suggest that Applicant specifically points out such support. It should further be noted that paragraph [0023] clearly states "...Because the local clocks of Station A and Station B are not

synchronized, the local clock of Station A indicates that the message was transmitted at time t1, while the local clock of Station B indicates that the message was transmitted at time T...". Nowhere does it clearly state the request transmission time be a future clock value.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-8, and 10-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah et al. (US 2002/0131370), hereinafter referred to as Chuah.

Regarding claim 1, 3, 6, 7, and 8, Chuah discloses a method that relates to estimation and correction of clock offset in distributed resources interconnected by a network (method for determining a relationship between the timing of a local clock of a node with

Art Unit: 2616

respect to the timing of a local clock of at least one other node in a wireless communications network page 1 [0001]). Chuah further discloses;

transmitting a clock information request message (timing messages) from said node to said other node at a request transmission time (T_{i0} in figure 1);

receiving at said node a response message from said other node at a response reception time (T_{i3} in figure 1), said response message including timing information pertaining to a request reception time (T_{i1}) and response transmission time (T_{i2}) at which said other node transmitted said response message (page 1 [0014]);

calculating a difference between the timing of said local clock of said node and said local clock of said other node based on said timing information, said request transmission time and said response reception time (offset between sender node and receiver node, page1 [0014]).

Chuah however fails to specifically disclose that the communication network be wireless. However it is well known in the art of the use of Network Time Protocol (NTP) as disclosed by Chuah for Ad Hoc Mobile Environments and thus it would have been obvious to implement the method for clock offset estimations for resources distributed across a network in a wireless communication network in order to accurately collect time information for a system.

Chuah further fails to specifically disclose the added limitation of recording at said node a request transmission time at which a clock information request message is

Art Unit: 2616

to be transmitted, wherein the request transmission time is a future clock value. Chuah however discloses access to respective time servers by particular nodes be scheduled (i.e., periodic) and that a particular node, routinely request a synchronization sequence (page 4 [0043]). It should further be noted that the concept of transmission of a message at a specified time is well known in the art, and thus it would have been obvious to a person skilled in the art at the time the invention was made to record at a particular node a request transmission time at which a clock information request message is to be transmitted in order to correctly and efficiently determine a relationship between clocks of a particular node in a scheduled or periodic manner.

Regarding claim 2, Chuah discloses calculating a propagation time for a signal to propagate between said node and said other node based on said timing information, said request transmission time, and said response reception time (clock offset between sender and receiver nodes, page1 [0014]).

Regarding claim 4, 5, Chuah discloses said method performs said transmitting, receiving and calculating steps to calculate a respective said difference between the timing of said local clock of said node and a respective said local clock of each of a plurality of said other nodes (figure 3 and page 3 [0041]).

Regarding claim 10, 12, 15,16, and 17, Chuah discloses a system that relates to estimation and correction of clock offset in distributed resources interconnected by a

Art Unit: 2616

network (system for determining a relationship between the timing of a local clock of a node with respect to the timing of a local clock of at least one other node in a wireless communications network page 1 [0001]). Chuah further discloses;

transmitting a clock information request message (timing messages) from said node to said other node at a request transmission time (T_{i0} in figure 1);

receiving at said node a response message from said other node at a response reception time (T_{i3} in figure 1), said response message including timing information pertaining to a request reception time (T_{i1}) and response transmission time (T_{i2}) at which said other node transmitted said response message (page 1 [0014]);

calculating a difference between the timing of said local clock of said node and said local clock of said other node based on said timing information, said request transmission time and said response reception time (offset between sender node and receiver node, page1 [0014]).

Chuah however fails to specifically disclose that the communication network be wireless and that the system comprises a transmitter, a receiver, and a processor.

However it is well known in the art of the use of Network Time Protocol (NTP) as disclosed by Chuah for Ad Hoc Mobile Environments and thus it would have been obvious to implement the method for clock offset estimations for resources distributed across a network in a wireless communication network in order to accurately collect time information for a system. It is further well known in the art that nodes of a system comprises a transmitter for transmitting messages (as seen in figure 1), a receiver for

Art Unit: 2616

receiving messages, and processors that calculate the clock offset (page 3 [0039]), and thus it would have been obvious to have network nodes consist of a transmitter, a receiver, and a processor.

Regarding claim 11, Chuah discloses calculating a propagation time for a signal to propagate between said node and said other node based on said timing information, said request transmission time, and said response reception time (clock offset between sender and receiver nodes, page1 [0014]).

Regarding claim 13, 14, Chuah discloses transmitting, receiving and calculating steps to calculate a respective said difference between the timing of said local clock of said node and a respective said local clock of each of a plurality of said other nodes (figure 3 and page 3 [0041]).

Allowable Subject Matter

6. Claims 9 and 18 are allowed.

7. Claim 9 and 18 is allowable due to the further limitations of calculating a subsequent transmission time at which said local clock of said other node was reading when said other node transmitted said subsequent signal based on said calculated difference and comparing said subsequent transmission time to a time representing a

Art Unit: 2616

beginning of a time slice to determine a propagation time for said subsequent signal to propagate between said other node and said node.

Response to Arguments

8. Applicant's arguments filed 11/09/2006 have been fully considered but they are not persuasive.

9. Applicant argues that Chuah does not anticipate the response transmission time at which said other node transmitted the response message and further states the word "immediately" specified in Chuah reveals that the time stamp included in the message is close, but not equal with the time when the message is transmitted. Examiner however disagrees. Webster's Ninth New College Dictionary states that immediately means as soon as. Chuah discloses that immediately upon reception or transmission, a time stamp is added to the message. Thus Examiner interprets the word immediately to correlate to "as soon as". So as soon as a message is sent or received, a time stamp is included, thus the time included inside the message is exactly equal with the time the message is transmitted or received.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

N.N.

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